

CLAIMS

What is claimed is:

1. A microfabrication process for fabricating a microelectromechanical systems device, comprising:

 depositing one or a stack of layers on a substrate;

 patterning said one or a stack of layers;

 depositing a middle layer on said one or a stack of layers; and

 patterning the middle layer using said one or a stack of layers as a photomask.
2. The method of claim 1, wherein the substrate permits light to pass therethrough.
3. The method of claim 2, wherein the substrate comprises glass.
4. The method of claim 1, wherein patterning said one or a stack of layers comprises forming longitudinally spaced grooves therein.
5. The method of claim 4, wherein patterning said middle layer comprises exposing said middle layer to light passed through the grooves in the one or a stack of layers.
6. The method of claim 1, further comprising depositing top layer over said middle layer.

7. The method of claim 1, wherein said one or an uppermost layer of said stack of layers is a sacrificial layer.

8. The method of claim 1, wherein the said middle layer comprises a negative- acting-photosensitive material.

9. The method of claim 6, wherein said top layer comprises nickel and aluminum.

10. The method of claim 6, further comprising patterning said top layer.

11. The method of claim 5, further comprising developing said middle layer to form longitudinally spaced ridges in the said middle layer disposed in the grooves in said one or a stack of layers.

12. The method of claim 11, wherein said top layer is patterned to define transversely extending strips which are supported by the longitudinally spaced ridges in the said middle layer.

13. A method for fabricating a microelectromechanical systems device, the method of comprising:

- a) depositing one or a stack of layers on a base layer, said one layer or an uppermost layer in said stack of layers being a sacrificial layer;
 - b) patterning said one or a stack of layers to provide at least one aperture therethrough through which said base layer is exposed;
 - c) depositing a photosensitive layer over said one or a stack of layers;
- and
- d) passing light through said at least one aperture to expose said photosensitive layer.

14. The method of claim 13, wherein the base layer is a substrate layer.

15. The method of claim 13, wherein said light comprises ultraviolet light.

16. The method of claim 13, wherein said photosensitive layer comprises a negative-acting-photosensitive material.

17. The method of claim 13, further comprising depositing a structural layer over said photosensitive layer.

18. The method of claim 17, further comprising removing said sacrificial layer.

19. The method of claim 18, wherein said steps (a) to (d) are repeated at least once, wherein each structural layer defines the base layer.